



Drinking water and potential threats to human health in nunavik: Adaptation strategies under climate change conditions

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Abstract:

In Nunavik, chlorine-treated water is delivered daily, by tank truck, to the houses, where it is stored in tanks. A large part of the Inuit population continues to depend on an untreated water supply, however. This traditional activity poses certain risks in a region with an abundant presence of migratory animals. Nunavik has also experienced significant climate warming since the beginning of the last decade. The main goal of this study, which took place in 2003 and 2004, was to evaluate drinking habits that may place Nunavik residents at an increased risk of gastroenteric diseases in the context of climate change. During the Amundsen cruise in fall 2004, we observed that raw water from the collection sites most frequently visited (brooks, lakes, rivers) was of good quality in most of the villages. Regular monitoring of these sites is necessary, however, and the public should be warned when the sites become contaminated. Of particular concern was the water from the individual storage containers, which was much more contaminated than the water at the collection sites. To develop or improve the climate change adaptation strategies in this area, we propose 1) establishing an appropriate environmental monitoring system, 2) improving wastewater disposal and municipal water systems, 3) involving nursing staff in microbiological testing of the water at community sites, 4) raising public awareness of the risks related to raw water consumption, and 5) gathering strategic health information during the periods of the year when cases of gastroenteric diseases are most frequent, in order to establish whether there is a link between these disorders and water quality. © The Arctic Institute of North America.

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Resource Description

Communication:

resource focus on research or methods on how to communicate or frame issues on climate change;
 surveys of attitudes, knowledge, beliefs about climate change

A focus of content

Communication Audience:

audience to whom the resource is directed

Public

Exposure :

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weather or climate related pathway by which climate change affects health

Food/Water Quality, Food/Water Security, Temperature

Geographic Feature:

resource focuses on specific type of geography

Arctic, Freshwater

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Non-U.S. North America

Health Impact:

specification of health effect or disease related to climate change exposure

Infectious Disease

Infectious Disease: Foodborne/Waterborne Disease

Foodborne/Waterborne Disease: Campylobacteriosis, Cryptosporidiosis, E. coli, Giardiasis, Salmonellosis, Shigellosis

Foodborne/Waterborne Disease (other): Amebiasis;Enterovirus meningitis;Hepatitis;Typhoid fever;Norwalk virus;Helicobacter gastritis;Toxoplasmosis

Intervention:

strategy to prepare for or reduce the impact of climate change on health

A focus of content

Mitigation/Adaptation:

mitigation or adaptation strategy is a focus of resource

Adaptation

Population of Concern: A focus of content

Population of Concern:

populations at particular risk or vulnerability to climate change impacts

Elderly, Low Socioeconomic Status, Racial/Ethnic Subgroup

Other Racial/Ethnic Subgroup: Inuit population

Resource Type:

format or standard characteristic of resource

Research Article

Timescale:

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time period studied

Time Scale Unspecified

Vulnerability/Impact Assessment:

resource focus on process of identifying, quantifying, and prioritizing vulnerabilities in a system

A focus of content